Response to Office Action of March 7, 2006 Attorney Docket: K35A1309 / (WSTDL-081A)

Amendments to the Claims:

1. (currently amended) A flex circuit assembly for use in a head stack assembly, the flex circuit assembly comprising

a flex circuit base film;

an integrated circuit device <u>including a top surface and a bottom surface</u>, the <u>bottom surface</u> disposed adjacent the flex circuit base film and including a solder bump connection;

an electrically conductive trace disposed upon the flex circuit base film, the trace including a contact pad, the contact pad electrically connected to the solder bump connection;

a flex circuit cover film disposed upon the flex circuit base film, the flex circuit cover film including an opening, the integrated circuit device and the electrically conductive trace being disposed within the opening;

an underfill portion disposed between the flex circuit base film and the integrated circuit device within the opening for attaching the integrated circuit device to the flex circuit base film, the underfill portion being formed of an underfill material, the electrically conductive trace including uncovered portions that are not covered by any of the integrated circuit device and the underfill portion within the opening; and

a glob top portion disposed upon the underfill portion and the flex circuit base film and completely covering the uncovered portions of for sealing the electrically conductive trace, the glob top portion not being disposed upon the top surface of the integrated circuit device, the glob top portion being formed of a glob top material, the glob top material being different than the underfill material.

- 2. (original) The flex circuit assembly of Claim 1 wherein the underfill material is a no-flow encapsulant.
- 3. (original) The flex circuit assembly of Claim 1 wherein the underfill material is a capillary flow encapsulant.
- 4. (canceled)
- 5. (canceled)

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- 6. (original) The flex circuit assembly of Claim 1 wherein the underfill portion has a coefficient of thermal expansion between coefficients of thermal expansion of the integrated circuit device and the flex circuit base film.
- 7. (original) The flex circuit assembly of Claim 1 wherein the underfill portion has a coefficient of thermal expansion greater than a coefficient of thermal expansion of the glob top portion.
- 8. (currently amended) A head stack assembly for use in a disk drive, the head stack assembly comprising:

a rotary actuator; and

a flex circuit assembly attached to the rotary actuator, the flex circuit assembly including:

a flex circuit base film;

an integrated circuit device <u>including a top surface</u> and a bottom <u>surface</u>, <u>the bottom surface</u> disposed adjacent the flex circuit base film and including a solder bump connection;

an electrically conductive trace disposed upon the flex circuit base film, the trace including a contact pad, the contact pad electrically connected to the solder bump connection;

a flex circuit cover film disposed upon the flex circuit base film, the flex circuit cover film including an opening, the integrated circuit device and the electrically conductive trace being disposed within the opening

an underfill portion disposed between the flex circuit base film and the integrated circuit device within the opening for attaching the integrated circuit device to the flex circuit base film, the underfill portion being formed of an underfill material, the electrically conductive trace including uncovered portions that are not covered by any of the integrated circuit device and the underfill portion within the opening; and

a glob top portion disposed upon the underfill portion and the flex circuit base film and completely covering the uncovered portions of for sealing the electrically conductive trace, the glob top portion not being disposed upon the

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top surface of the integrated circuit device, the glob top portion being formed of a glob top material, the glob top material being different than the underfill material.

- 9. (original) The head stack assembly of Claim 8 wherein the underfill material is a no-flow encapsulant.
- 10. (original) The head stack assembly of Claim 8 wherein the underfill material is a capillary flow encapsulant.
- 11. (canceled)
- 12. (canceled)
- 13. (original) The head stack assembly of Claim 8 wherein the underfill portion has a coefficient of thermal expansion between coefficients of thermal expansion of the integrated circuit device and the flex circuit base film.
- 14. (original) The head stack assembly of Claim 8 wherein the underfill portion has a coefficient of thermal expansion greater than a coefficient of thermal expansion of the glob top portion.
- 15. (currently amended) A disk drive comprising:

a disk drive base; and

a head stack assembly rotatably coupled to the disk drive base, the head stack assembly including:

a rotary actuator; and

a flex circuit assembly attached to the rotary actuator, the flex circuit assembly including:

a flex circuit base film;

an integrated circuit device <u>including a top surface and a bottom</u> <u>surface</u>, the bottom <u>surface</u> disposed adjacent the flex circuit base film and including a solder bump connection;

an electrically conductive trace disposed upon the flex circuit base film, the trace including a contact pad, the contact pad electrically connected to the solder bump connection;

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a flex circuit cover film disposed upon the flex circuit base film, the flex circuit cover film including an opening, the integrated circuit device and the electrically conductive trace being disposed within the opening

an underfill portion disposed between the flex circuit base film and the integrated circuit device within the opening for attaching the integrated circuit device to the flex circuit base film, the underfill portion being formed of an underfill material, the electrically conductive trace including uncovered portions that are not covered by any of the integrated circuit device and the underfill portion within the opening; and

a glob top portion disposed upon the underfill portion and the flex circuit base film and completely covering the uncovered portions of for sealing the electrically conductive trace, the glob top portion not being disposed upon the top surface of the integrated circuit device, the glob top portion being formed of a glob top material, the glob top material being different than the underfill material.

- 16. (original) The disk drive of Claim 15 wherein the underfill material is a no-flow encapsulant.
- 17. (original) The disk drive of Claim 15 wherein the underfill material is a capillary flow encapsulant.
- 18. (canceled)
- 19. (canceled)
- 20. (original) The disk drive of Claim 15 wherein the underfill portion has a coefficient of thermal expansion between coefficients of thermal expansion of the integrated circuit device and the flex circuit base film.
- 21. (original) The disk drive of Claim 15 wherein the underfill portion has a coefficient of thermal expansion greater than a coefficient of thermal expansion of the glob top portion.